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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,506	01/15/2002	Ingo Klimant	18744-0004	6811

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EXAMINER

KOSLOW, CAROL M

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/031,506

Applicant(s)

KLIMANT, INGO

Examiner

C. Melissa Koslow

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 19 and 22-27 is/are rejected.
- 7) ☒ Claim(s) 16-18, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1755

The patent abstracts of Japan citation in the information disclosure statement filed 5 April 2002 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the publication number of the Japanese application for the cited abstract is not given. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

The patent abstracts of Japan citation in the information disclosure statement filed 5 April 2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Applicants only provided one Japanese abstract and that was for JP 62-148580. This abstract was considered.

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification only teaches carboxyl reactive groups. There is no teaching of the other reactive groups in claim 14.

Art Unit: 1755

Claims 8, 9 and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

There is a discrepancy between the teaching of the specification and the subject matter of claims 8, 9 and 11. Claim 8 teaches the polymer has low absorption of water and/or a minimum gas permeability, while page 7 of the specification teaches the polymer has low absorption of water and a minimum gas permeability. Claim 9 teaches the polymers can be poly(meth)acrylic copolymers, while page 7 of the specification teaches the polymer can be poly(meth)acrylic polymers. ^{claim} Page 11 teach the glass is essentially free of micropores, which allows for the presence of some pores, while page 6 teaches the glass is non-porous.

Claim 17 and 23-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 is improperly dependent on claim 15. Claim 15 is not directed to a method. Claim 17 should depend from claim 16, the first method claim. Claims 23-26 are provides for the use of the particles of claim 1, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

35 U.S.C. 101 reads as follows:

Art Unit: 1755

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 23-26 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 8-10, 19 and 27 are rejected under 35 U.S.C. 102(a) as being anticipated by Huber et al.

The Search Report indicated this article was published before the international filing date.

This article teaches polyacrylonitrile particles containing Ru(II) tri(4,7-diphenyl-1,10-phenanthroline-trimethylsilylpropanesulfonate). These particles are formed by diffusing the ruthenium complex into the polyacrylonitrile particles from a solvent. The article teaches these particles are used in the claimed process. The article teaches the claimed particles and methods.

Claims 1-9 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 2,132,348.

This reference teaches luminescent particles produced by diffusing a luminescent dye into preformed polymer particles from a solvent (lines 105-107 and 119-124 on page 3). The

Art Unit: 1755

polymer can be polyvinyl chloride or poly(meth)acrylic (Plexiglas) and the dye is taught in lines 51-73 on page 3. This list includes those claimed. The reference teaches the claimed particles and method.

Claims 1-5, 7-9, 11, 12, 22 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 99/06821.

This reference teaches luminescent particles where the luminescent substance are in a glass or polyvinyl chloride matrix. The particles are produced by incorporating the luminescent compound into compressed monolithic sol-gel glasses which are sintered, ground and fractionated according to size. Thus, the particles are nonporous. The luminescent substance can be those of claims 3, 4 and 7. These particles are used as the process of claim 27. The reference teaches the claimed particles and methods.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/06821.

As stated above, this reference teaches the claimed particles. The reference does not teach the composition of the glass matrix. It is notoriously well known that the majority of sol-gel produced glasses and the most stable glasses are all silica based. For these reason, one of ordinary skill in the art would have found it obvious to use a silica based glass as the sol-gel

Art Unit: 1755

glass of the reference. These glasses are known to have surface hydroxyl groups. The reference makes obvious the claimed particles.

Claims 1, 2, 8-10, 14, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al.

This reference teaches luminescent polymer particles, where the luminescent dye in the particles is shielded from the ambient chemical, biochemical and gaseous parameters. The dyes can be those having a long decay time (col. 10, lines 25-29) and the particles can be composed of polymethacrylic polymer, polyacrylonitrile, polyvinyl chloride and polyvinylidene chloride (col. 6, lines 28-34). The particles are produced by diffusing the dye into the preformed particles from a solution or bath dying. Column 13 teaches covalently bonding a biomolecule onto the surface of the particles, which means the particles must be modified to include one of the claimed reactive groups. The reference suggests the claimed particles.

Claims 1-3, 7-10, 14, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singer et al.

This reference teaches luminescent polymer particles, where the luminescent dye in the particles is shielded from the ambient chemical, biochemical and gaseous parameters. The dyes can be those claimed (col. 12-13) and the particles can be composed of polymethacrylic polymer, polyacrylonitrile, polyvinyl chloride and polyvinylidene chloride (col. 13, lines 55-66). The particles are produced by diffusing the dye into the preformed particles from a solution or bath dying. Column 16 teaches covalently bonding a biomolecule onto the surface of the particles, which means the particles must be modified to include one of the claimed reactive groups. The reference suggests the claimed particles.

Art Unit: 1755

Claims 16-18, 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The claimed processes are not taught or suggested by the cited art of record. There is no teaching to form particles from solutions comprising a polymer and a long decay time luminescent substance. The known processes form particles from solutions comprising the monomer of the desired final polymer and a long decay time luminescent substance.

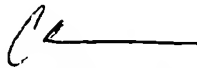
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (703) 308-3817. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached at (703) 308-3823.

The fax number for Amendments filed under 37 CFR 1.116 or After Final communications is (703) 872-9311. The fax number for all other official communications is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661 or (703) 308-0662.

cmk
May 16, 2003


C. Melissa Koslow
Primary Examiner
Tech. Center 1700